Beryllium

USSR

UDC 620.178.74:669.725

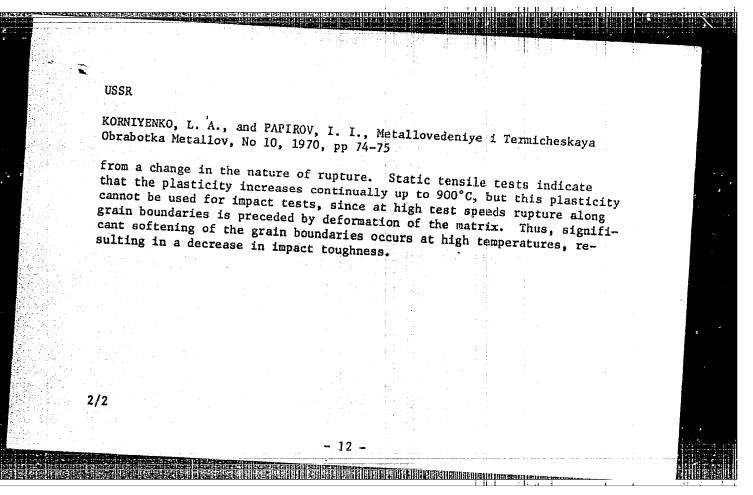
KORNIYENKO, L. A., and PAPIROV, I. I., Physico Technical Institute, Academy of Sciences, UkrSSR

"Impact Toughness and Structure of Fractures in Beryllium"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1970, pp 74-75

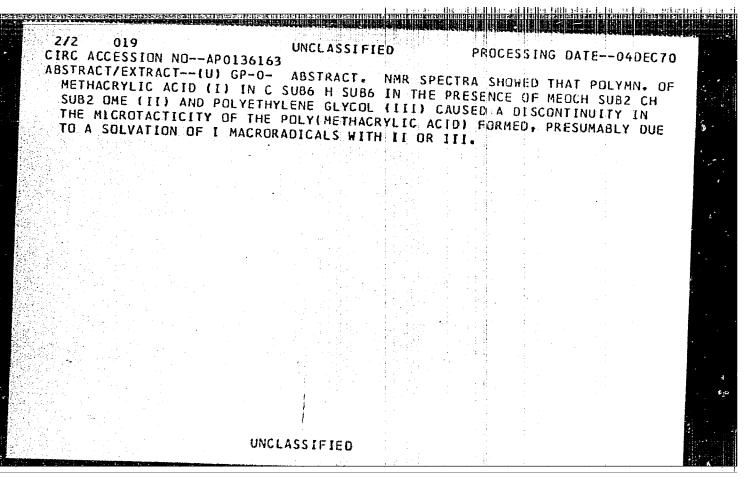
Abstract: The temperature dependence of the impact toughness and fracture structure of deformed beryllium was studied. The material tested was distilled beryllium, 99.9% pure. Specimens 10 x 10 x 55 mm were cut from vacuum-cast, upset and rolled billets, then notched 2 mm deep by an electrical erosion method to prevent stress concentration or microcrack formation. The specimens were mechanically polished, then subjected to recrystallization annealing at 850°C for 15 minutes before testing. The specimens were tested at 20-900°C. The impact toughness of the specimens increases from about 0.05 kg/cm² at 20°C to 0.2 kg/cm² at 450°C, then decreases to 0.04 kg/cm² at 900°C. Fractographic studies showed that the decreased impact toughness of beryllium at high temperatures results

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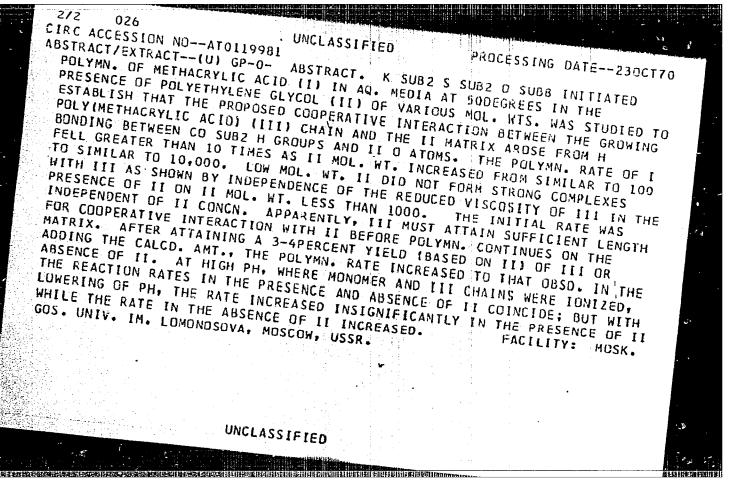


1/2 019 TITLE--INFLUENCE OF THE SOLVATION OF GROWING CHAINS ON THE MICROTACTICITY PROCESSING DATE--04DEC70 AUTHOR-(04)-OSADA, YE., NEKRASOVA, N.A., PAPISOV, I.M., KABANOV, V.A. COUNTRY OF INFO-USSR SOURCE--VYSOKOMOL. SOEDIN., SER. 8 1970, 12(5), 324-5 DATE PUBLISHED----70 SUBJECT AREAS--CHEMISTRY TOPIC TAGS--SOLVENT ACTION, NMR SPECTRUM, POLYMERIZATION, METHACRYLIC ACID, METHYL ETHER, ETHYLENE GLYCOL, METHOXY COMPOUND CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3007/0724 STEP NO--UR/0460/70/012/005/0324/0325 CIRC ACCESSION NO--APO136163 UNCLASSIFIED

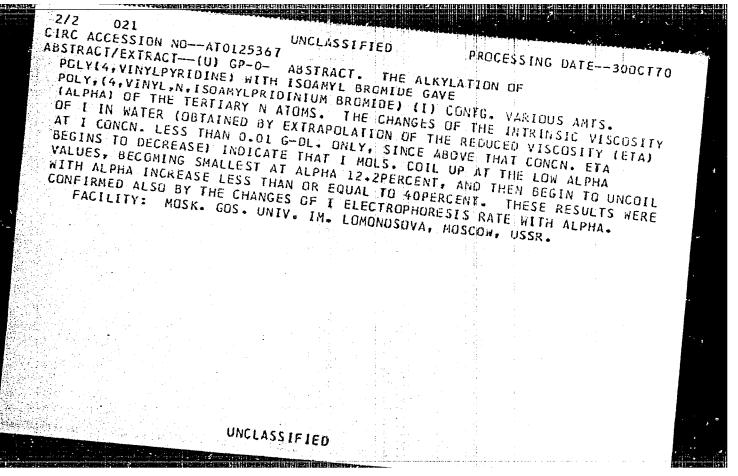
APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"



1/2 TITLE--ROLE OF THE COOPERATIVE INTERACTION OF GROWING CHAINS AND 026 MACROMOLECULAR MATRIXES DURING POLYMERIZATION -U-AUTHOR-(05)-GSADA, YE., ANTIPINA, A.D., PAPISOV, I KABANOV, V.A., PRUCESSING DATE--230C170 COUNTRY OF INFO--USSR SOURCE-DOKL. AKAD. NAUK SSSR 1970, 191(2), 379-402 (PHYS CHEM) DATE PUBLISHED ---- 70 SUBJECT AREAS--CHEMISTRY TOPIC TAGS--MACROMOLECULE, METHACRYLIC ACID, POLYMERIZATION, HYDROGEN BONDING, CHEMICAL REACTION RATE, MOLECULAR INTERACTION CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1997/1127 STEP NO--UR/0020/70/191/002/0379/0402 CIRC ACCESSION NO--ATOL19981 UNCLASSIFIED



021 TITLE-STRUCTURAL CHANGES IN MACROMOLECULES OF POLY,4, VINYL, N. ISOANYLPYRIDINIUM BROMIDES -U-AUTHOR-(05)-KIRSH, YU.E., BESSMERTNAYA, L.YA., TORCHILIN, V.P., PAPISOV, PROCESSING DATE-- 300CT70 COUNTRY OF INFO-USSR SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(3), 603-6 (CHEM) DATE PUBLISHED----70 SUBJECT AREAS-CHEMISTRY TOPIC TAGS-MACROMOLECULE, POLYMER, VINYL COMPOUND, PYRIDINE, BROMINATED CONTROL MARKING-NO RESTRICTIONS DOCUMENT CLASS-UNCLASSIFIED PROXY REEL/FRAME--2000/0695 CIRC ACCESSION NO-AF0125367 STEP NO--UR/0020/70/191/003/0603/0606 UNCLASSIFIED SEESISSI HISELTÄR ROMANIA KANTANAN MARKANIA KANTAN KANTAN KANTAN KANTAN KANTAN KANTAN KANTAN KANTAN KANTAN KAN



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UDC 621.910.71

USSR.

KRYUKOVSKIY, V. V., PAPIVIN, V. N., and CHERNYSHEVA, S. P.

"On Chip Formation When Cutting Secondary Titanium Alloys"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 122-126

Translation: Results are given of an investigation of the effect of cutting conditions and the surrounding environment on contraction of chips in cutting secondary titanium alloy. The power dependencies are determined and the microstructures and microhardness of the chip are studied. It is shown that with an increase in the power of feeding and cutting, contraction of the alloy chip decreases, and the coefficient of contraction may take on a value less than one. The speed of cutting influences the formation of "negative" chip contraction more than feeding does. The surrounding environment in which the cutting takes place does not influence chip contraction. The force of cutting rises noticeably with an increase in the depth of feeding. Increasing the cutting speed leads to a certain reduction in it. Increasing the microhardness of the chip layer next to the cutting takes place primarily through work hardening. One illustration, three tables, and one bibliographic entry. 1/1

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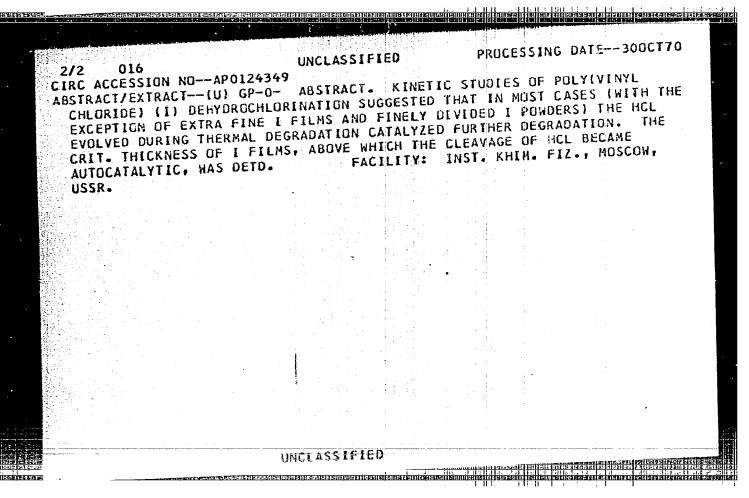
PAPKO, G. F., Candidate of Medical Sciences, and SKURKDVICH, S. V., Professor, Laboratory of the Immunalogy of Leucoses Central Order of Lenin Institute of Hematology and Blood Transfusion

"Use of Hyperimmune Antistaphylococcal Plasma"

Moscow, Khirurgiya, No 7, Jul 70, pp 88-91

Abstract: Hyperimmune antistaphylococcal plasma, which contains a high titer of antitoxic antistaphylococcus antibodies, was administered to some 200 adults and 100 children (including 75 premature infants) in various Moscow hospitals and clinics. The patients were suffering from a variety of Streptococcal diseases, including sepsis, pneumonia, osteomyelitis, and staphyloderma. The plasma was injected intravenously (4 to 10 ml/kg body weight). The dose and number of transfusions were determined by the patient's age, general condition, the severity of the disease, and the level of passive antistaphylococcal immunity. Treatment usually comprised from 2 to 10 transfusions, 3 to 4 days apart, combined with antibiotics. The results were good to excellent in the great majority of the cases, and most of the institutions conducting the trials of the plasma endorsed its further use. Topical application of the plasma for the treatment of suppurating postoperative wounds also proved to be very effective.

PROCESSING DATE--300CT70 TITLE-CRITICAL PHENOMENA DURING THE THERNAL BREAKDOWN OF POLY, VINYL CHLORIDE -U-AUTHOR-[02]-PUDBY, V.S., PAPKO, R.A. COUNTRY OF INFO-USSR SOURCE-VYSOKOMOL. SOEDIN., SER. B 1970, 12(3), 218-22 DATE PUBLISHED ----- 70 SUBJECT AREAS -- MATERIALS TOPIC TAGS-THERMAL DEGRADATION, POLYVINYL CHLORIDE, HYDROGEN CHLORIDE, CATALYSIS, CHEMICAL KINETICS CENTROL MARKING-NO RESTRICTIONS DOCUMENT CLASS-UNCLASSIFIED STEP NO--UR/0460/70/012/003/0218/0222 PROXY REEL/FRAME--2000/0677 CIRC ACCESSION NO--APO124349 UNCLASSIFIED



TV2 009 UNCLASSIFIED

PROCESSING DATE--300CT70

TITLE--PURIFICATION OF POLYMERIC MATERIALS -U-

AUTHOR-(04)-TIME, A.V., USHAKOV, V.G., HARTINOVSKIY, G.A., PAPKO, V.V.

CCUNTRY OF INFO-USSR

REFERENCE-OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, DATE PUBLISHED--03MAR70

SUBJECT AREAS-MATERIALS

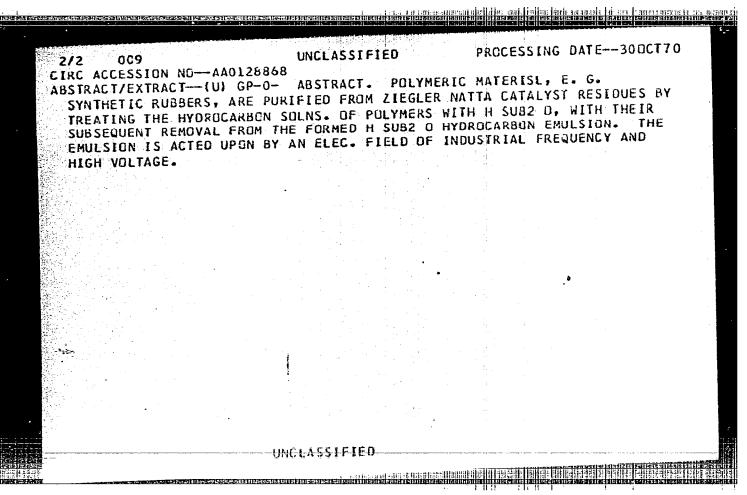
TUPIC TAGS-SYNTHETIC RUBBER, CHEMICAL PURIFICATION, CHEMICAL PATENT, EMULSION, ELECTRIC FIELD

CONTROL MARKING-NO RESTRICTIONS

DOCUMENT CLASS---UNCLASSIFIED PROXY REEL/FRAME--3002/1469

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NU--AA0128868 UNCLASSIFIED



UNCLASSIFIED PROCESSING DATE--30JCT70

TITLE--MOVEMENT OF CHARGED WATER DROPLETS IN A HOMOGENEOUS D.C. ELECTRIC

FIELD -UAUTHOR-(03)-PANCHENKOV, G.M., VINOGRADOV, V.M., PAPKO, V.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TEKHNOL. TOPL. MASEL 1970, 15(2), 34-6

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--SOIDUM CHLORIDE, ELECTRIC FIELD, WATER, LIQUID DROP MODEL

CONTROL MARKING--NO RESTRICTIONS

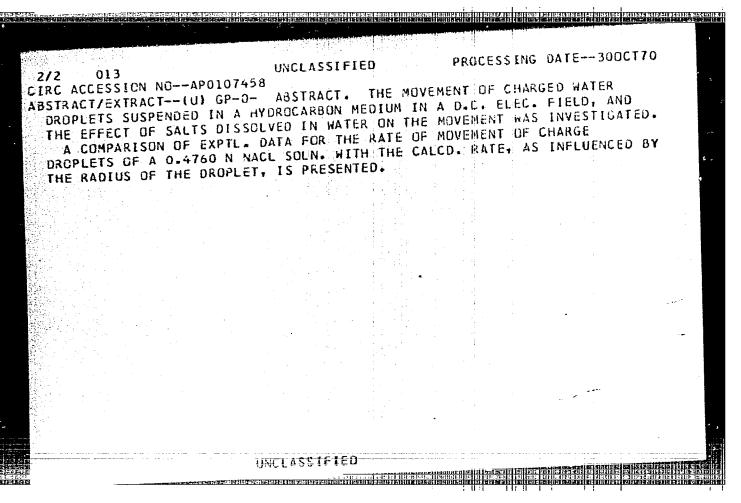
DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0929

STEP NO--UR/0065/TO/015/002/0034/0036

CIRC ACCESSION NO--APO107458

UNCLASSIFIED



USSR

UDC: None

ARTEMENKOV, L. I., KOZLOV, P. I., MELIKHOV, P. I., MUKHIN, P. A., and PAPKOV, L. N.

"Maintaining a String Plasma in the TOKAMAK TO-1 by an Automatic Control System"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, vol 17, No 5, 1973, pp 251-254

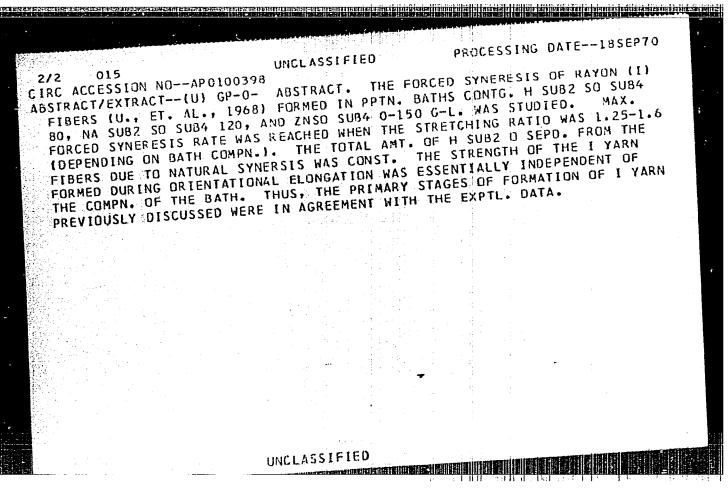
Abstract: The principal difficulty in controlling the maintenance of a string plasma in the Tokamak TO-1 is the amplification of the current induced in the control winding that occurs with shifts of the plasma. To cope with this and other control problems, the authors of this letter conducted experiments on the TO-1 to study the dependence of the microscopic characteristics of a plasma string on the time constant of the control winding within the range of 0.04-2 string on the time constant of the discharge at initial hydrogen pressures seconds. Typical oscillograms of the discharge at initial hydrogen pressures of 2.10-4 mm Hg, with a longitudinal magnetic field of 8.2 kgauss and a vertical correcting field of 23 gauss for two values of the control winding time constant, correcting field of 23 gauss for two values of as much as 400 msec is basic-show that a duration of a plasma current pulse of as much as 400 msec is basic-show that a duration of the vertical correcting field. The curves for these funcally a function of the vertical correcting field. The curves for these funcally a function of Examination of oscillograms taken by magnetic probes

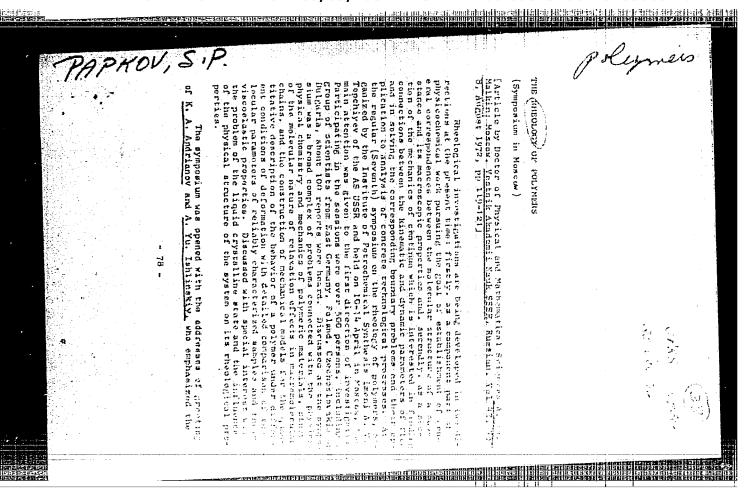
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ARTEMENKOV, L. I., et al, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, vol 17, No 5, 1973, pp 251-254

measuring the shift in the plasma string along its large radius shows that it can be divided into three stages, each of which is analyzed. The authors express their thanks to I. N. Golovin for his comments and to N. N. Shvindt for conducting the optical measurements.

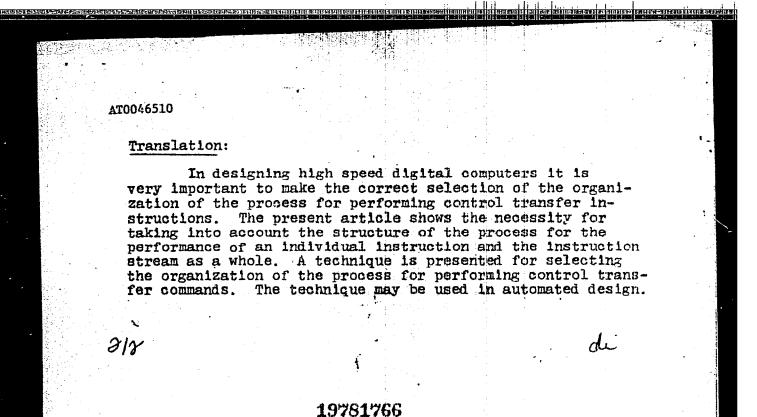
PROCESSING DATE--18SEP70 UNCLASSIFIED TITLE--PRIMARY STAGES OF VISCOSE FIBER FORMATION -U-AUTHOR-(04)-UKHANOVA, Z.V., PROZOROVA, G.YE., ANTIPOVA, R.V., PAPKOV, S.P. COUNTRY OF INFO--USSR SOURCE--KHIM. VOLOKNA 1970, (1), 32-4 DATE PUBLISHED ---- 70 SUBJECT AREAS -- MATERIALS TOPIC TAGS--RAYON, ELONGATION CONTROL MARKING-NO RESTRICTIONS STEP NO--UR/0183/70/000/001/0032/0034 DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1984/1824 CIRC ACCESSION NO--AP0100398 UNCLASSIFIED





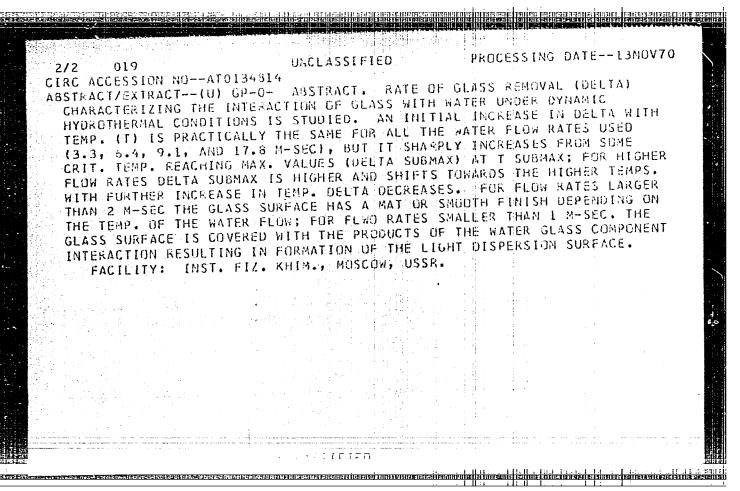
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UNCLASSIFIED 1/2 019 TITLE-INTERACTION OF GLASS WITH WATER UNDER DYNAMIC HYDROTHERMAL CONDITIONS -U-AUTHOR-(04)-DERYAGIN, B.V., PAPLAUSKAS, A., RYABOV, V.A., SEMENOV, N.I. COUNTRY OF INFO--USSR SOURCE--OOKL. AKAD. NAUK SSSR 1970, 191(6), 1316-18 DATE PUBLISHED---- 70 SUBJECT AREAS -- MATERIALS, CHEMISTRY TOPIC TAGS--GLASS SURFACE PROPERTY, LIQUID GLASS, WATER, FLOW RATE CONTROL MARKING--NO RESTRICTIONS DOCUMENT CLASS--UNCLASSIFIED STEP NU++UR/0020/70/191/006/1315/1318 PROXY REEL/FRAME--3006/1128 CINC ACCESSION NO-LATOPAGNA



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UDC 539.4.015.1

DERYAGIN, B. V., Corresponding Member, Academy of Sciences, USSR, PAPLAUSKAS, A. B., RYABOV, V. A., and SEMENOV, N. I., Institute of Physical Chemistry, Academy of Sciences, USSR, Moscow

"Strengthening of Glass by the Hydrothermal Method"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 6, 21 December 1970, pp 1326-1328

Abstract: It is shown that when glass is subjected to hydrothermal treatment under dynamic conditions, not only is the surface of the glass dissolved, but it is also greatly strengthened. Under certain conditions, strengthening by a factor of 5-6 can be obtained with retention of the optical properties of the glass, and glass with a light-diffusing surface can be obtained with strengthening by a factor of 4-5. If the optical properties of the glass need not be considered, tenfold strengthening may be obtained. This is valid only with respect to defects of the glass, abstracting from other factors. 3 figures, 5 bibliographic entries.

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UDC 551.787.915.087.92

KSENOFONTOV, M.YE., PAPIOVA T.T., MIRONOV, A.I., SMYSLOV, I.I., RAPATSKAYA, I.V.

"Tensotransducers Based On Silicon-Spinel"

V sb. Pribory tochnoy mekh. i tekhnol. priborost. (Devices Of Frecision Mechanics And Technology Of Instrument Construction-Collection of Works), Moscow, 1971, pp 36-38 (from RZh: Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 28282)

Translation: Tensotransducers [tenzopreobrazovatel'] (T) based on Si-spinel were produced by build-up on spinel wafers (ground, polished, and annealed in a H₂ flow at a 1500° C temperature) of a monocryatelline layer of Si by pyrolysis of the spinel. With the aid of photolithography, tensoresistors were produced on the structure prepared, the outlets to which were produced by thermocompression. The T produced had the characteristics: resistance, 480 ohm; resistivity, 0.01 ohm.cm; temperature coefficient of resistance, 9.1 x 10⁻⁴ °C⁻¹; coefficient of tensosensitivity (as a function of crystallographic orientation) 55 2 95. 1 ill. 2 tab. 2 ref. 7.8.

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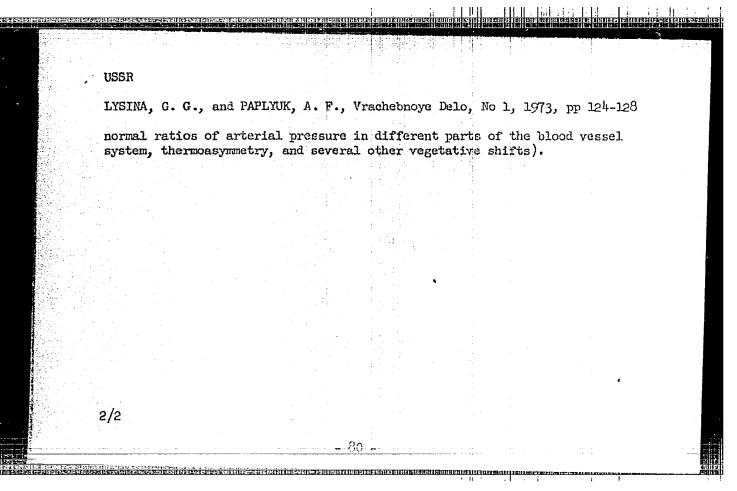
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LYSINA, G. G., and PAPLYUK, A. F., Kiev Scientific Research Institute of Labor Hygiene and Occupational Diseases

"Henodynamic Changes Caused by General Low-Frequency Jerky Vibrations"

Kiev, Vrachebnoye Delo, No 1, 1973, pp 124-128

Abstract: Hemodynamic changes were studied in 33 female bridge crane operators with 10 and more years of service. Early pathological signs in the nervous system were observed in 24, and late pathological signs in 9 operators. Data obtained with mechanical and cardiographic methods revealed several homodynamic changes. Among them, a decrease in the maximal, lateral, pulse, and stroke pressure. The minimal pressure was low at the outset of the disease but it increased with the severity of clinical symptoms and the length of occupation. A general peripheral resistance of precapillaries to the blood flow and propagation rate of the pulse wave was much higher (compared with controls) in operators with more than 10 years of service. This condition was indicated by the greater tone of small and intermediate blood vessels that is characteristic for hypertension. A decreased maximal, pulse, and stroke blood pressure indicated the presence of disturbances in the regulatory mechanisms which appeared in the form of an angiodystonic syndrome (asymmetry and disturbance in 1/2



AP0047043 Acc. Nr.:

Ref. Code: UR612

UDC 621.787.4:669.15.156

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PAPSHEV. D. D., Candidate of Technical Sciences

"Increasing the Gontact Endurance of High-Strength (Tempered) Steels by Surface Rolling"

Moscow, Vestnik Masinostroyeniya, No 1, 1970, pp 35-38

Abstract: The results of thorough investigations of a series of problems related to the efficiency of mechanical surface hardening, as a method for improving the contact endurance of high strength steels are presented. A great number of carbon and alloy steels of different origins, used in the petroleum, bearing and machine tool industries were tested. The surface hardening was done on a lath by fall rolling using a specially designed device. It was observed that the temperature during the rolling process sharply decreases from the surface toward the depth of the layer. The degree of heating is determined mainly by pressure and speed of rolling, and also by the size of the de-

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formation region, and by mechanical and thermophysical properties of the material. Studies of temperature fields make it possible to substantiate the mechanisms of residual stress formation. It follows, that the residual stresses are the result of stresses produced by thermal stresses and by phase transformations. the effect of phase transformations occuring when rolling the martensite steels is illustrated in a graph. The results show, that surface plastic deformation is accompanied by the rise in density of dislocations, fractionation of blocs and by increase in micro deformations. It can be assumed that the dispersion hardening, the variation of dislocation density and the transformation of the residual austenite into martensite play a great role in the effect of strengthening by surface plastic deformation. It is pointed out that, structural phase transformation, complex in nature, may occur, due to complex effect of high pressure and temperature in a deformable layer.

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It can also be assumed that a preliminary plastic deformation of the surface layer and a high level of residual compression stresses, produced by it, will increase the resistance of plastic deformation to friction. And in view of increasing structural homogeneity the formation and the development of fatigue cracks is being delayed.

All these assumptions are substantiated by a great number of laboratory investigations and also by a series of industrial operations of rolling contact bearings for drill bits, thrust bearings and other tempered steel parts. Thus the treatment of high-strength steels by ball rolling can be considered as the most simple and efficient method for increasing the contact endurance of high-strength steels. Original article has 5 figures and 2 tables.

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1/2 016 UNCLASSIFIED PROCESSING DATE--230CT7
TITLE--SYNTHESIS OF (8.ARGININE), DE.9.GLYCINE AND
DE.(8.ARGININE.9.GLYCINE) VASOPRESSINS -UAUTHOR-(02)-PAPSUYEVICH, O.S., CIPENS, G.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 709-10

DATE PUBLISHED ---- 70

SUBJECT AREAS -- BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--VASOPRESSIN, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1997/2014

STEP NO--UR/0079/70/040/003/0709/0710

CIRC ACCESSION NO--APO120657

UNCLASSIFIED

PROCESSING DATE--230CT7 UNCLASSIFIED 2/2 CIRC ACCESSION NO--APO120657 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ZAORAL AZIDE METHOD (1965) STARTING WITH THE APPROPRIATE HEXAPEPTIDE WITH L-PROLINE AMIDE OR L, PROLYL, N, TOSYL, L, ARGININE AMIDE, RESP., GAVE TOS, L, CYS(BZL), L TYR, L, PHE, L, GLY, L, ASN, L, CYS(BZL), L, PRO, L, ARG(TOS) NH SUB2 M. 105-8DEGREES, (ALPHA) PRIME25 SUBD 9.3DEGREES, AND TOS, L, CYS(BZL), L, TRY, L, PHE, L GLY, L, ASN, L, CYS(BZL), L, PRO, NH SUB2 M. 222-4DEGREES, (ALPHA) PRIME25 SUBD MINUS 17.3DEGREES. THESE POLYPEPTIE AMIDES TREATED WITH NA IN LIO. NJ SUB3 TO REMOVE THE PROTECTIVE GROUPS. THEN DXIDIZED WITH K SUB3 FEICNISUB6 AND PURIFIED ON SEPHADEX G-15 GAVE 18, ARGININEI, DE, 9, GLYCINEVA SOPRESSIN HAVING NO DETECTABLE UTEROTONIC ACTIVITY AND SHOWING A DEPRESSOR RATHER THAN PRESSOR ACTIVITY IN RATS; SIMILARLY THE OTHER POLYPEPTIDE AMIDE GAVE DE. 8, ARGININE, 9, GLYCINE IVASOPRESSIN FOUND TO HAVE MILD UTEROTONIC AND INST. ORG. SIN., RIGA, USSR. FACILITY: VASORPRESSOR ACTIVITY.

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DVORNIKOV, V.I., PAPUSH, V.G.

"Temperature Dependence Of The Noise Factor Of Germanium Transistor Of The Drift Type"

Elektron. tekhnika. Nauch.-tekhn.sb. Kriogen. elektronika (Electronics Technology. Scientific-Technical Collection. Cyrogenic Electronics), 1971, Issue 1(3), pp 16-22 (from RZh:Elektronika i yeye primeneniye, No 10, October 1972, Abstract No 10B183)

Translation: The experimental characteristics are presented of the noise of germanium drift transistors at high frequency in the region of the white spectrum. The temperature dependence is studied of the noise factor of transistors during cooling of them in the temperature interval 78--295° K. The value of the noise factor in all the transistors tested decreases at first in proportion to the reduction of the temperature, reaches a minimum value at some temperature, and subsequently again increases. The optimum temperature corresponding to the minimum value of the noise factor lies in the interval 120--200° K. 2 ill. 3 tab. 2 ref. N.K.

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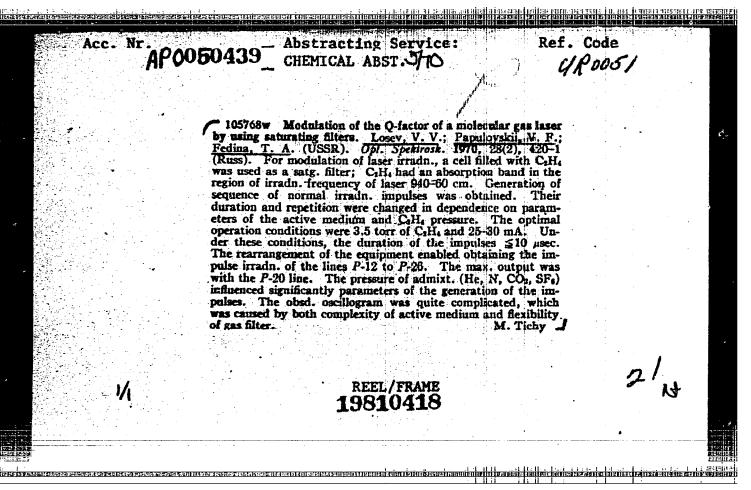
UDC 661.183.123

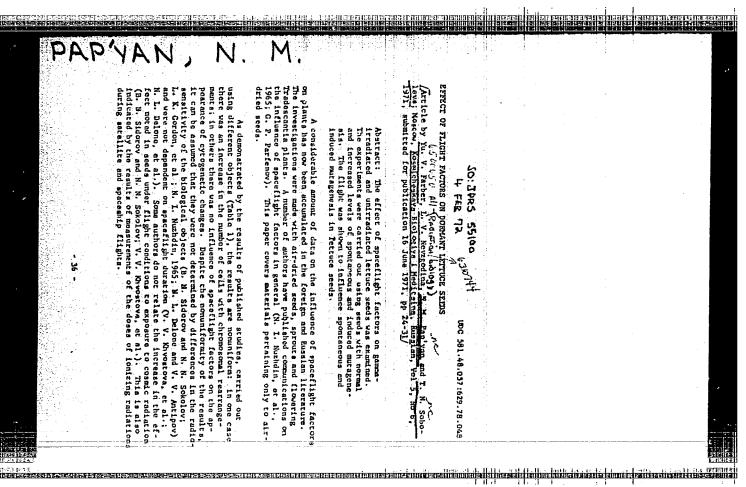
PAPUKOVA, K. P., KUZIETSOVA, N. N., and LIREL', A. N.

"Synthesis of Phenoxyalkylphosphonic Acids and Ion Exchange Resins Derived from Them"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, No 8, Aug 72, pp 1808-1813

Abstract: Phenoxyalkylphosphonic acids with the general formula $C_6 H_5 O(CH_2)_n$ $PO_3 H_2$ were synthesized, where n=1,2,3 and 6. The products are dibasic acids; they are colorless crystalline compounds, soluble in ethanol, dimethylformamide and with heating, in nitromethane, water, dichloromethane, and acetone; they are insoluble in acetone. Their melting points and acid strengths decrease with increasing length of the alkyl chain. Polycondensation of these acids with formaline in presence of HCl leads to the production of ion exchange resins containing phosphonic acid groups in the aliphatic side chains of varying length. The exchange capacity ranged from 8.9 to 6.6 mg-eq/g. The kinetic properties of these resins were inversely proportional to the length of aliphatic chains containing the phosphine group.





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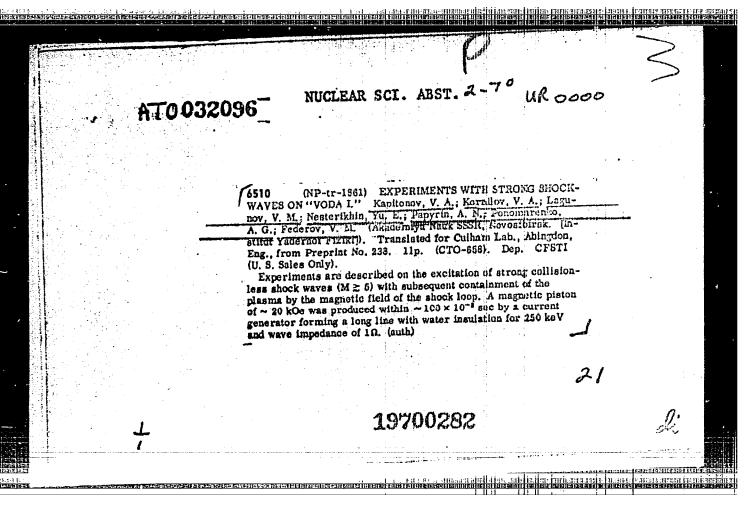
DIANOVA, V. A., MOVSESYAN, R. A., PARYGIN, V. N., and PAPYAN, V. A.

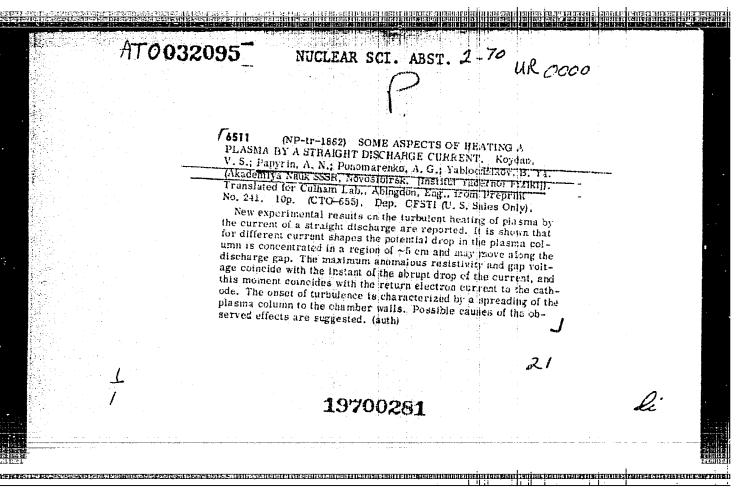
"Modulation of the Helium-Neon Laser Emission With the Help of Lithium Niobate Crystals"

Moscow, Geodeziya i Kartografiya, No 1, Jan 72, pp 32-36

Abstract: Experiments conducted with new electro-optical materials, lithium niobate (LiNbO3) crystals, at the Yerivan Folytechnic Institute imeni K. Marx, are described. The results are discussed by reference to experimental and calculated modulation depth - modulating power curves of LiNbO3, shown in comparison with KDP curves. It was found that the use of LiNbO3 crystals instead of KDP crystals in the capacity of electro-optical element in a photometric range finder with a modulator of toroidal type possesses advantages over ADP and KDP crystals, including: 1) the remired power to obtain the same efficiency of the modulator decreases by 2-2.5 times; 2) the size of the modulator can be reduced by 4 times; 3) the LiNbO3 crystals are not hygroscopic and are much stronger than KDP crystals; 4) thermal effects have not been observed in modulators with LiNbO3 crystal at the average power of 6 w. Three illustr., six biblio. refs.

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UDC: 517.948.32

GOVORUKHINA, A. A. and PARADOKSOVA, I. A.

"An Infinite System of Linear Algebraic Equations"

V sb. Materialy Vses. konferentsii po krayev zadacham (Materials of the All-Union Conference on Boundary Value Problems -- collection of works) Mazan', mazan University, 1970, pp 83-86 (from RZh-Natematika, No. 3, March 71, Abstract No. 3B267)

Translation: The following infinite system of algebraic equations is considered:

where
$$Tx = \{\xi_n\} = \begin{cases} \sum_{k=-\infty}^{\infty} a_{n-k}x_k, & n \ge 0, \\ \sum_{k=-\infty}^{\infty} b_{n+m} (k)x_k, & n < 0; \end{cases}$$

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GOVORUKHINA, A. A., et al, sb. Materialy Vses, konferentsii po krayev zadacham Kazan', Kazan University, 1970, pp 83-80

sequences
$$\{a_n\}$$
, $\{b_n\} \in \underline{1}$; $A(t) = \sum_{k=-\infty}^{\infty} a_k t^k$, $|t| = 1$; $c = \{c_n\} \in \underline{1}_2$;

 $x = \{x_n\} \in \underline{l}_2$; m(k) is a whole-numbered function, which takes each of its values at no more than q points; m(k) < 0 for k < 0.

Theorem 1. If $1 - A(t) \neq 0$, the Noether theorem is justified, and the index of the system is determined by the formula

$$\kappa = -\operatorname{Ind} \left[1 - \Lambda(t)\right]_{|t|=1} = -\int_{|t|=1}^{\infty} dr \arg \left[1 - \Lambda(r)\right].$$

A method for regularizing system (1) is indicated for the case of m(k) = mk. It is asserted that the spectrum of operator T consists of 1) the spectrum of operator A i.e., of the points in the closed curve $\lambda - A(t)$, |t| = 1, and those points that do not lie on it, where $Ind[\lambda - A(t)]_{t \in \mathbb{R}^2} \neq 0$; 2) eigen-values of some completely continuous operator which do not belong to the spectrum of operator A. V. Rogozhin 2/2

USSR

UDC: 621.396.6-181.5

PARFENYUK, V. M., VORONA, A. V., ZHDANOV, A. N., MATVEYCHUK, A. I.

"A Device for Charging Evaporators"

USSR Author's Certificate No 270433, filed 20 Jan 67, published 13 Aug 70 (from RZh-Radiotekhnika, No 1, Uan 71, Abstract No 1V222 P)

Translation: This Author's Certificate introduces a device for charging evaporators such as vacuum atomizing chambers. The device contains a ratchet drum, a trough and a shield. As a distinguishing feature of the patent, the operational reliability of the device is improved by fastening the shield to the trough, the housing of the device is coupled through leaf springs to a rotating lever, and the ratchet drum is fitted with a socket which accommodates a plumger.

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TECHNICAL DESCRIPTION OF THE PROPERTY OF THE P

1/2 009 UNCLASSIFIED PROCESSING DATE--230CT70
TITLE--A COMPARISON OF NETWORKS OF A THREE PHASE ASYNCHRONOUS MOTOR WITH
RECTIFIERS IN THE STATOR CIRCUIT TO ACHIEVE REDUCED SPEEDS -UAUTHOR-(02)-PARAIL, V.A., KADEYEV, G.D.
COUNTRY OF INFO--USSR
SOURCE--NOVOCHERKASSK, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY,

ELEKTROMEKHANIKA, NO 3, 1970, PP 285-289
DATE PUBL ISHED----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTRIC NETWORK, ELECTRIC MOTOR, ELECTRONIC RECTIFIER

CONTROL MARKING--NO RESTRICTIONS

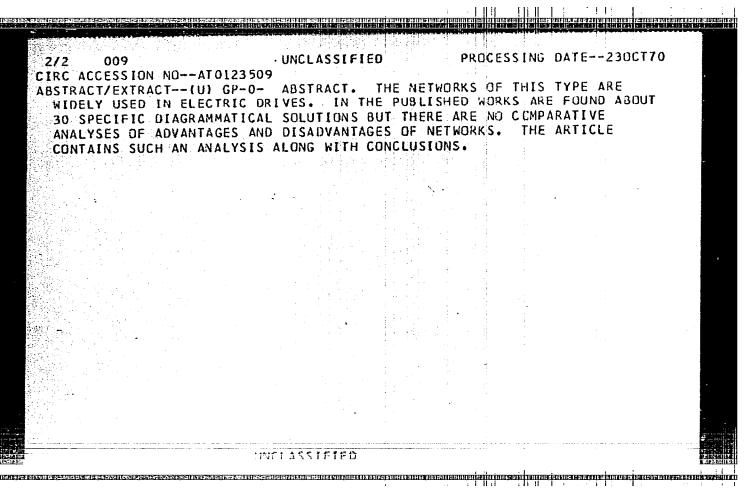
DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1999/1685

STEP NO--UR/0144/70/000/003/0285/0289

CIRC ACCESSION NO--ATO123509

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Acc. Nr: APO049045

Ref. Code:UP0357

PRIMARY SOURCE: Vestnik Oftal mologii, 1970, Nr /

PP 68-70

THE EFFECT OF SURGICAL TREATMENT ON THE HEALING OF AN INFECTED PERFORATING WOUND OF THE CORNEA IN RADIATION SICKNESS

V. T. Paramey

Healing of staphylococcus-infected (strain 209) corneal wounds with and without foreign bodies (75 rabbits, 119 eyes) in radiation sickness (600 r) was studied by applying electrothermometry, bacteriological and other methods of investigation. Antibacterial therapy (levomycetin, iodinol) contributed to the formation of a concreted bacterial therapy (levomycetin, iodinol) contributed to the formation of a concreted cicatrix of the cornea in 45 of 49 eyes. In combined medicamentous and surgical treatment the eyeball could be saved in 25 out of 56 eyes only. Wounds reaching the vitreous body ended with the loss of the eye in all cases owing to enophthalmitis. The character of the eye hyperthermia depended upon the severity of the wound and the method of treatment. The adverse effect of a surgical trauma is to be ascribed to changes in the properties of the eye following radiation injury.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"

USSR

UDC 617.713-001.4-022-06:617.001.287-036.864

TO THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY

T., Chair of Eye Diseases, Central Scientific Research PARAMEY. Laboratory, Grodno Medical Institute

"The Effect of Surgery on the Healing of an Experimental Infected Wound of the Cornea During Radiation Sickness"

Moscow, Vestnik Oftal mologii, No 1, 1970, pp 68-70

Abstract: The corneas of 80 rabbits were incised and the wounds infected with a suspension of a 24-hour Staphylococcal culture after the animals had been exposed to whole-body irradiation (600 r). of the animals were treated with drugs alone (levomycetin, iodinol, streptomycin, penicillin), others with drugs plus surgery. The radiation lesions did not prevent favorable healing in animals treated Surgery, however, regardless of the drugs with which conservatively. Surgery, however, regardless of the drugs with whic it was combined, had adverse effects. It intensified hemorrhages, it was combined that exidation and prolonged hyperthermia of the eyeball, caused purulent exudation and prolonged hyperthermia of the eyeball, and in many cases resulted in loss of the eye. These effects of and in many cases resulted in loss of the eye. surgical trauma are ascribed to changes in the magnetic properties of the eye following radiation injury.

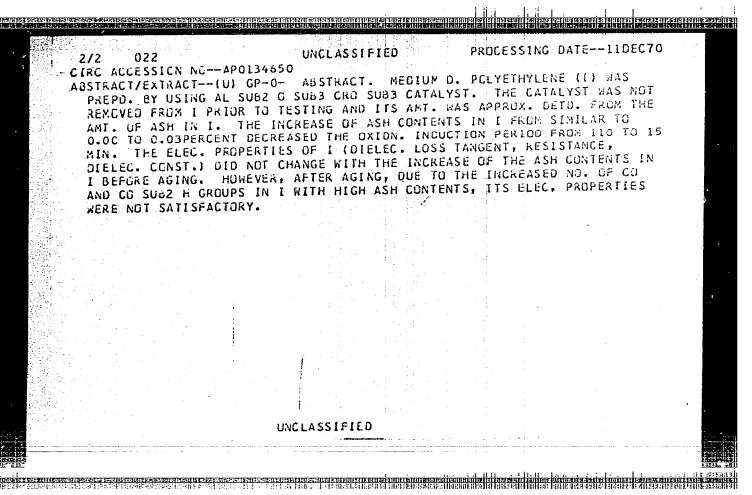
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APPROVED FOR RELEASE: 08/09/2001

AMICI ASSIEIE	PROCESSING DATE11DEC70 (egitti SHSBI
UNCLASSIFIED ITTLE-INFLUENCE OF CATALYST RESIDUES ON LUCUVA, L.I. PARAMUNKUV, YE.YA. COUNTRY OF INFO-USSR		
SOURCE-PLAST. MASSY 1970, (5), 63-4		
DATE PUBLISHED70		
SUBJECT AREASCHEMISTRY, MATERIALS, PHY TOPIC TAGSPGLYETHYLENE, CATALYTIC POLY CHRGMIUM CXIDE, ELECTRIC PROPERTY	YSICS YMERIZATION, ALUMINUM OXIDE,	
NASHING-NO RESTRICTIONS		
DÉCUMENT CLASSUNCLASSIFIED STEP PROXY REEL/FRAME3006/0921 STEP	NOUR/0191/70/000/005/0063/0064	
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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"



Converters

USSR

UDC: 621.394.676

STEPANOV, A. V., PARAMONOV, G. N., GOLOMOZYUK, V. A., "Arsenal" Plant imeni
V. I. Lenin

"A Device for Converting Binary Code to Binary-Decimal-Sexagesimal Code"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 31, Nov 71, Author's Certificate No 318158, Division H, filed 29 Sep 69, published 19 Oct 71, p 211

Translation: This Author's Certificate introduces a device for converting binary code to binary-decimal-sexagesimal code. The device contains a first binary counter, a pulse generator and a binary-decimal-sexagesimal counter. As a distinguishing feature of the patent, conversion accuracy is improved by using a series-parallel summation device which contains a second binary counter and a pulse distributer whose input is connected to the generator output. The input of the generator is connected to the output of the first binary counter, and the distributer outputs are connected in parallel to the inputs of the second counter, and in series to the input of the binary-decimal-sexagesimal counter.

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USSR

UDC 681.325.54.042

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SUKHOV, L. N., SHLYAKHTIN, V. T., KRYLOV, Yu. D., PANOV, V. P., and PARAMONOV, K. G.

"A Reversible Binary Counter"

USSR Author's Certificate No 280542, Filed 12 Dec 68, Published 9 Dec 70 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B188 P)

Translation: The purpose of this invention is to ensure stable operation of a counter, given a significant level of noise. This is achieved by having each digit position of the counter consist of two "memory" cells connected in series via an AND cell, while a NOT inverter is connected to the input of the first position. The binary reversible counter includes an inverter, which is meant to control the counter according to the change in potential; delay lines consisting of logical "memory" elements; logic circuits consisting of AND cells; and memory elements consisting of logical "memory" elements.

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UDC: 681.327.2

SUKHOV, L. N., SHLYAKHTIN, V. T., KRYLOV, Yu. D., PANOV, V. P., PARAMONOV, K. G.

"A Reversible Binary Counter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 280542, Class 21, filed 12 Dec 68, p 40

Abstract: This Author's Certificate introduces a reversible binary counter which contains digital places on "memory" cells, AND cells, and a control bus. As a distinguishing feature of the patent, operational stability is ensured in the presence of an appreciable level of industrial interference by making each digital place of the counter in the form of two "memory" cells connected in series through an AND cell, and connecting a NOT inverter to the input of the first digital place.

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USSR

UDC 621.378.525

GAPONOV, S.V., PARAMONOV, L.B.

"Laser Pulse Modulation With Retuning Of An Auxiliary Passive Resonator By Meens Of Ultrasound"

Izv. VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1262-1264

Abstract: The paper discusses use of the photoelasticity effect for internal modulation of a gasecus laser. The laser resonator used in the experiment consists of two connected interferometers—active and passive. The active resonator, formed by a spherical mirror (r = 1200 mm) and a flat mirror has a length of 800 mm. A gas-discharge tube filled with a mixture of He and Ne is placed in the resonator. The length of the tube is 420 mm. The passive resonator is made in the form of a block of funed quartz glass at the two opposite ends of which mirrors are deposited. At the lower part of the block a placedlectrical redictor is attached, which excites a resonant ultrasonic wave in the quartz with a frequency of 45.8 kHz, the pressure loop of which coincides with the position of the optical beam and the direction of the stresses with the polarization. The laser rediction at a wavelength of 0.65 micron was registered from the direction of the quartz block with the mid of a FEU[photoemultiplier]-22 and a Sl-7

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GAPONOV, S. V. PARAMONOV, L. B., Izv. VUZ: Radiofizika, Vol XV, No 8, Aug 1972, pp 1262-1264

oscillograph. In the experiment repetition frequencies up to 5 MHz were obtained with a 20 V amplitude of the control voltage. The power in a pulse was approximately equal to the average power of the continuous radiation originating during substitution of the passive resonator by an output mirror. The percentage modulation did not reach 100 percent. Part of the energy of the modes, the frequencies of which do not coincide with the frequencies of the passive resonator, is radiated and forms a fixed background. In the experiment the fixed background was 6.10-2 percent of the pulse power. The authors thank Ya.I.Khanin for valuable comments. 2 fig. 5 ref. Received by editors, 7 Jan 1972.

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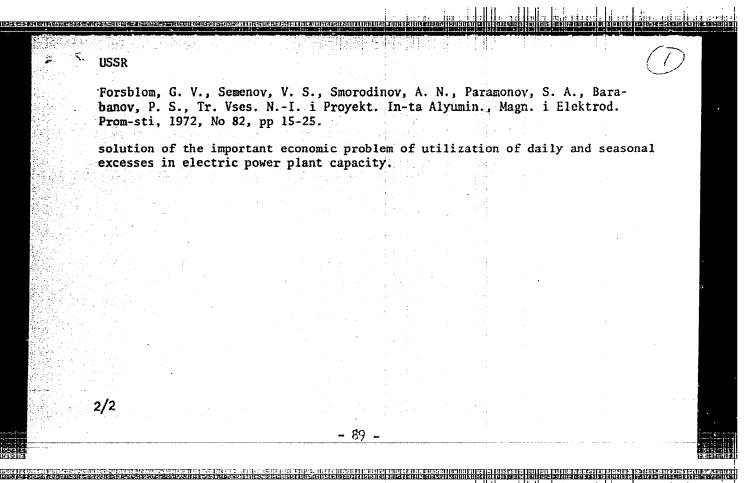
UDC: 669.71.472

FORSBLOM, G. V., SEMENOV, V. S., SMORODINOV, A. N., PARAMONOV, S. A., BARABANOV, P. S.

"Artificial Cooling as a Method of Intensification of the Operation of Aluminum Electrolyzers"

Tr. Vses. N.-I. i Proyekt. In-ta Alyumin., Magn. i Elektrod. Prom-sti [Works of All-Union Scientific Research and Planning Institute for the Aluminum, Magnesium and Electrode Industry], 1972, No 82, pp 15-25 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G169, by G. Svodtseva).

Translation: Tests were performed at one plant of a group of electrolyzers, equipped with various artificial cooling systems. The effectiveness of the cooling was estimated on the basis of full thermal and energy balances. The maximum increase in thermal losses amounted to 50-55,000 watts. The increase in yield per current in cooled electrolyzers was facilitated by thicker and more constant linings. The transfer of metal in cooled electrolyzers was 1.5-2 cm less than in ordinary electrolyzers. The mean parameters of the technological mode and data on the yield per current and consumption of electric power are presented. The use of a forced electrolyzer can facilitate the 1/2



CIA-RDP86-00513R002202330001-8"

APPROVED FOR RELEASE: 08/09/2001

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UDO 396.674

PARAMONOV. V.K.

"Optimization Of The Parameters Of A Cophased Antenna With A Wide-Band Active Reflector"

Elektrosvyaz', No 4, Apr 1972, pp 71-74

Translation: The conditions are discussed which are necessary for attainment of complete unidirectivity by a cophased antenna with a wide-band reflector, fed with the aid of a directional coupler. By a judicious choice of antenna parameters, it is possible to be certain of obtaining good characteristics over a wide frequency range. As an example, an antenna is considered which can find use for television reception in the frequency range of television channels 1-5. 1 ill. 3 ref. Received by editors, 3 March 1971.

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VDC 911.3.613.11

SKOROBOGATOVA, A. M., PARAMONOV, Yu. A., LUKACHEV, V. V., ZABORSAKIV, V. A., SHILOV, Yu. M., GRISHGHENKODERFURGERISCHER,

"The Significance of Some Factors in Polar Regions for the Formation of Adaptation Processes"

V sb. Akklimatiz, i krayev. patol. cheloveka na Severe (Acclimatization and Regional Pathology of Man in the Far North-collection of works), Arkhangel'sk, 1970. pp 66-68 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No. 1.36.43 by V. Zhadovskaya)

Translation: This work includes data gathered in the Antarctic, Central Arctic Basin, and experimental research in a cooling chamber. The parameters studied were: arterial pressure, pulse rate, plethysmogram, rheogram, and skin temperature in 112 polar residents. The most marked shifts occurred in new arrivals or in those who returned after an absence of 5-5 years; as well as in those polar residents with high arterial pressure. In conditions where volume charge is increased and relationship of atmospheric elements is altered, there is a decrease of skin sensitivity to low temperature. A disturbance of the balance between sympathetic and parasympathetic regulation of cardiovascular activity is also observed.

- 40 -

USSR

PARAMONOV, Yu. M.

"The Service Life of Systems with Particularly Dangerous Failures"

Modelir. Slozhn. Sistem [Modeling of Complex Systems -- Collection of Works], No 1, Riga, Zinatne Press, 1972, pp 31-42 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V267, by the author).

Translation: The service life of certain systems with particularly dangerous failures is assigned on the basis of the permissible probability of failure before the end of the service life. The determination of a service life recommended generally in these cases is equal to the lower tolerance limit, which is related to the necessity of assigning not only the required reliability, but also the confidence probability, which is quite difficult in practice. It is demonstrated in this article that these difficulties can be avoided by solving the following problem. The distribution function of the random quantity ξ -- the time between failures of the product -- is known with an accuracy to parameter θ . It is required with fixed ϵ , $0 < \epsilon < 1$, to find the statistics τ such that $\sup_{t \in \mathcal{T}} P(\xi < \tau) = g$. A number of conditions are

found under which τ exists, including in the case of censored observations.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"

Lasers and Masers

USSR

UDC 621.375.82

MALYSHEV, B. N., KANAUKH, N. P., PARAMONOVA, N. A., KULIKOVSKIY, B. N.

"Space-Energy Characteristics of the Liquid Circulation of POCl3Sn-Cl4Nd Lasers"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 1, Moscow, 1971, pp 139-140 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1062)

Translation: The space-energy characteristics of a POCl₃SnCl₄Nd circulation liquid pulsed laser were investigated and compared at various flow rates of the active liquid through the laser cell: at rest and for laminar and turbulent flow of the liquid. Authors abstract.

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UDC: 621.373:530.145.6

MALYSHEV, B. N., KANAUKH, N. P., PARAMONOVA, N. A., KULIKOVSKIY, B. N.

"Space-Energy Characteristics of a POCl₃SnCl₄Nd Liquid Circulation Laser"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1,

Moscow, 1971, pp 139-140 (from EZh-Radiotekhnika, No 5, May 71, Abstract No 55172)

Translation: The space-energy characteristics of a POCl₃SnCl₄Nd liquid pulse

Translation: The space-energy characteristics of a Pocl₃SnCl₄Nd liquid pulse

Translation: The space-energy characteristics of a Pocl₃SnCl₄Nd liquid pulse

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"

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USSR

UDC: 632.95.024

PARAMONOVA. T. V. Belorussian Scientific Research Institute of Fruit, Vegetable and Potato Growing

"Effect of Herbicides on the Physiological Processes in Both Resistant and Sensitive Plants"

Moscow, Khimiya v sel'skom khozyaystve, vol 9, no 8, 71, pp 50-51

Abstract: Greenhouse experiments on soddy-podzolic, silty-loam soil were conducted to study the effect of promethrine at doses of 2 kg/ha and linurone -- 1.5 kg/ha (act. ingred.) on the physiological processes in resistant (carrot) and sensitive (fat hen) plants. The testing procedure is detailed and the data for water content, respiration (CO₂ in leaves), total sugars (in % of absolutely dry matter) and total nitrogen (in % of absolutely dry matter) are provided in a table. It is shown that the nature of the disturbances of physiological processes in sensitive and resistant plants is dissimilar. Fat hen plants treated with promethrine and limurone display lower water contents, reduced peroxidase activity and lower

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PARAMONOVA, T. V., Khimiya v sel'skom khozyaystve, vol 9, no 8, 71, pp 50-51

respiration energy. It does not seem likely, however, that the death of the plants was caused by the reduced respiration rate. The disturbance of protein synthesis, the higher amount of nonprotein forms of nitrogen as well as the disturbance in the synthesis of sugars resulting in a marked disaccharide-to-monosaccharide ratio seem to have been the most probable responsible factors. The latter factor indicates a predominance of hydrolytic processes over synthetic. The carrot plant had at first displayed a higher water content in the leaves, higher respiration intensity and an increased activity of redox enzymes as though there were protective reactions directed to control detoxication after herbicide treatment.

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PROCESSING DATE-20NOV70 UNCLASSIFIED! 1/2 PITLE--EFFECT OF INTERNAL ALPHA IRRADIATION ON THE CHARACTERISTICS OF THE ANICH EXCHANGER AV, 23M -U-AUTHUR-(C5)-NIKOLAYEV, V.M., VYSOKCOSTROVSKAYA, N.B., PARAMONOVA, V.I., OSIPOV, S.V., FROLOV, V.I. COUNTRY OF INFO-USSR SOURCE--RADIGKHIMIYA 1970, 12(1), 127-32 DATE PUGLISHED----70 SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS-ALPHA RADIAITON, ANION EXCHANGE RESIN, PLUTONIUM ISOTOPE, MECHANICAL STRENGTH, PARTICLE SIZE/(U)AV23M ION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

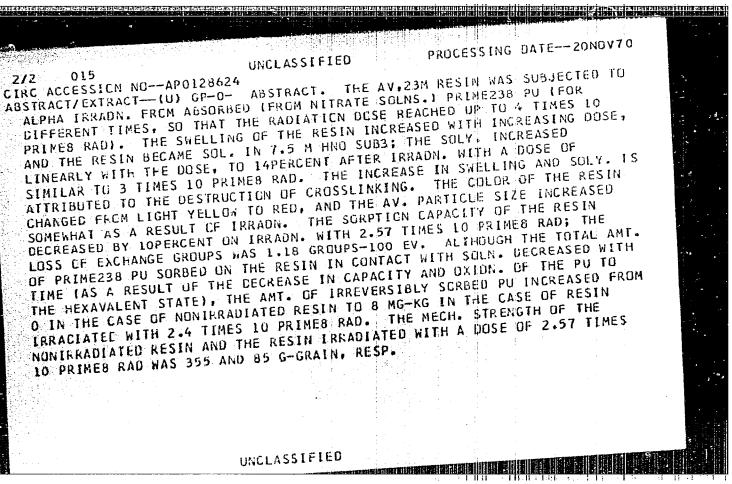
DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--3002/1206

STEP NO--UR/0135/70/012/001/0127/0132

CIRC ACCESSION NO--APO123624

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UDC 541-15

PARAMONOVA, V. I., VYSOKOOSTROVSKAYA, N. B., NIKOLAYEV, V. M., OSIPOV, S. V., and FROLOV, V. I.

"Effect of Internal Alpha-Irradiation on Characteristics of Anion Exchanger AV-23M"

Leningrad, Radiokhimiya, Vol 12, No 1, 1970, pp 127-132

Abstract: The article describes results of a study of the effect of internal alpha-irradiation dose on the capacity, basicity, swelling capacity, mechanical grain strength and solubility of vinylpyridine anion exchanger AV-23M, as well as the distribution of some fission products of Zr-95 + Nb-95, Ce-144 + Pr-141, Ru-106 + Rh-106. The isotope Pu-238 was used for irradiation. The principal result of the action of alpha radiation was found to be the breakdown of resin crosslinkage. This is manifested in increased swelling capacity and decreased grain strength. Internal alpha-irradiation of the resin results in its dissolution, with complete dissolution, according to estimates, setting in at a dose of about (2.5 - 3.8) 10 genr Pu-238/kg

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PARAMONOVA, V. I., et al., Radiokhimiya, Vol 12, No 1, 1970, pp 127-132

absolutely dry resin.

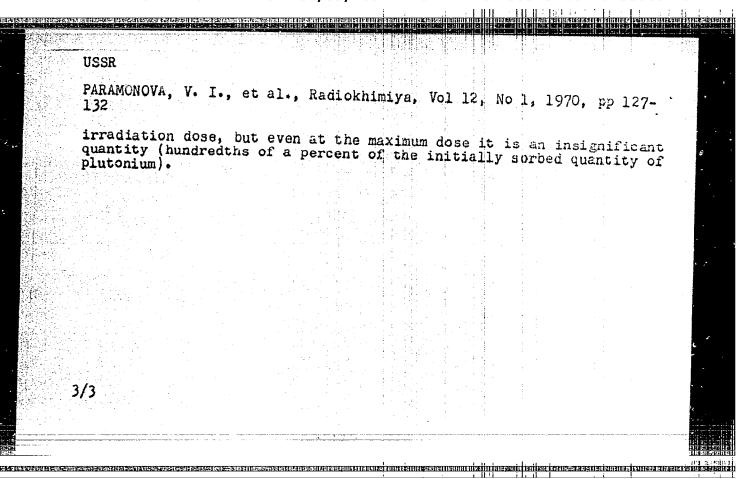
At a maximum dose equal to 2.57.108 rad there is a mere 10 percent decrease in capacity and practically no change in pasicity. According to resultant data the capacity loss rate constant was estimated to be $K = (0.27 \pm 0.1) \cdot 10^{-7}$ rad-1 and the radiation-chemical reaction yield Go = 1.18 ± 0.45 exchange groups/100 ev.

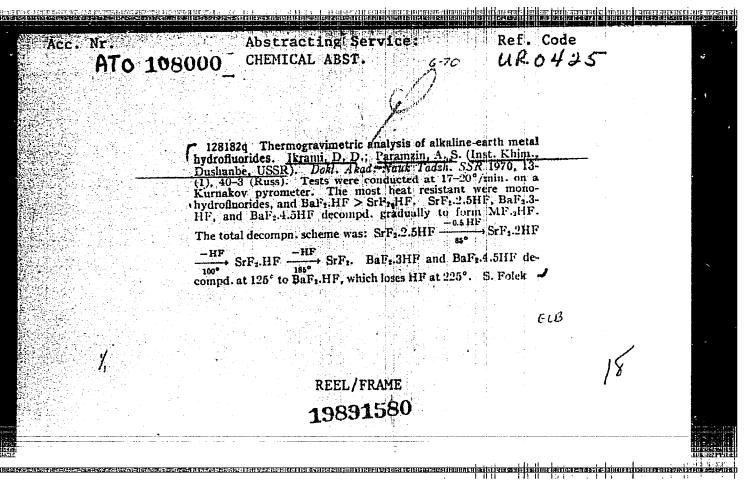
Dissolution of the resin and the decrease in its capacity result in the appearance of plutonium-238 in solution. Not less than 70 percent of the plutonium found in solution is oxidized to the hexavalent state.

Alpha-irradiation results in changed resin sorption characteristics. The amount of irreversibly sorbed plutonium increases with

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"





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UDC 613.644-0-07.612.014.45

PARAN'KO, N. M., Krivorog Institute of Labor Sygiene and Occupational Diseases

"The Spread of Vibration of Complex Spectral Composition in Body Tissues"

Moscow, Gigiyena i Sanitariya, No 4, 1971, pp 103-104

Abstract: The purpose of this experimental study on healthy male subjects was to investigate the spread of vibration of complex spectral composition and to determine whether the spread is related to static contraction of the muscles. The spread of vibration was judged from the level and nature of the spectral composition recorded on the handle of a drilling machine and at various points on the body (back of the hand, elbow, upper third of the arm, shoulder blade, forehead). The extent to which vibration spread was found to vary with the frequency and energy of the stress. Low frequencies (up to 63 Hz) spread through the tissues of the upper extremities to the trunk. Medium frequencies (from 63 to 250 Hz) were absorbed by the tissues of the upper extremities. High frequencies (over 250 Hz) were completely absorbed by the tissues of the hand and forearm. A direct relationship was observed between static exertion and intensity of vibration, particularly at the basic frequency, i.e., the frequency with the maximum energy. The conduction of vibration increased in

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PARAN'KO, N. M., Gigiyena i Sanitariya, No 4, 1971, pp 103-104

the tissues with increasing static contraction of the muscles of the upper extremities. With a doubling of the grip force, the level of vibrations ranged from 1 to 3 db at frequencies up to 16 Hz, from 5 to 7 db at frequencies of 32 to 63 Hz, and an average of 2 db at frequencies of 125 to 250 Hz.

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UDC 616.132.2-008.64-082:362.121(47-21)

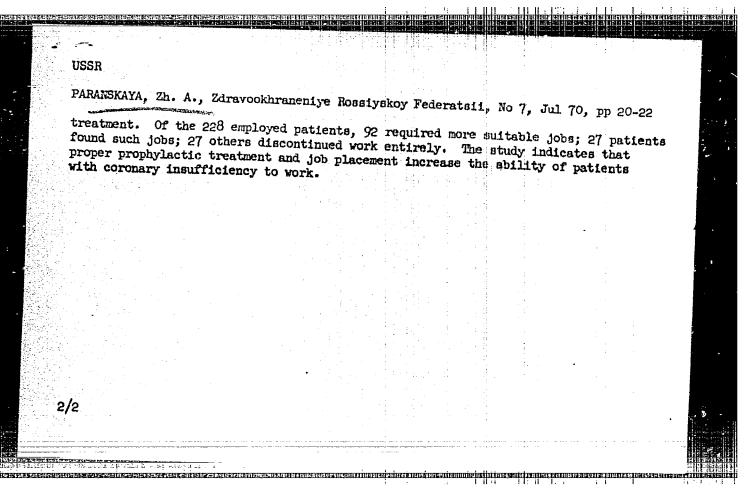
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PARANSKAYA, Zh. A., Moscow

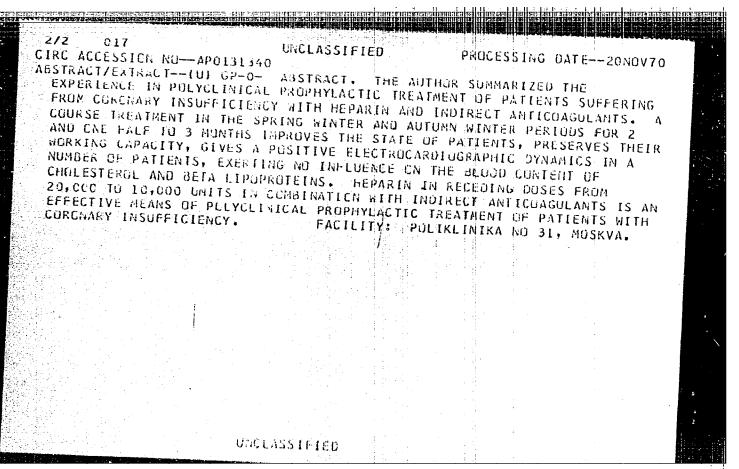
"Some Data on Medical Care Given to Patients with Coronary Insufficiency in the Municipal Polyclinic"

Moscow, Zdravookhraneniye Rossiyskoy Federatsii, No 7, Jul 70, pp 20-22

Abstract: A diagnosis of coronary insufficiency was established for 317 of 5983 patients treated at Polyclinic No 31. Of the 317, 237 had suffered from this condition for 1-6 years and 41, for over 10 years; 45 of the patients had myocardial infarctions. Many patients appeared for treatment less frequently than necessary, and 46 did not consult the physicians at all, primarily because the clinic was overcrowded and it was difficult to set up appointments. Furthermore, 122 out of the 317 patients needed at-home care, but only 96 were visited by physicians, and those less frequently than necessary. Another study revealed that adequate medical treatment was not given to 14.8% of the patients at the clinic and 21.4% of those at home. Some who needed hospitalization remained at home either because there were no available beds in the hospital or because they refused to be hospitalized. While 89 patients were either retired, invalids (due to other diseases), or housewives, 228 were employed. As a result of recurring temporary incapacitation, the last group missed 3,284 work days per year. Patients treated with heparin or other enti-



UNCLUSE TELES DENGES TARE DATE TO MONTO PROCESSING DATE-- ZONOV70 UNCLASSIFIED TETLE -- EXPENIENCE IN POLYCLINICAL PROPHYLACTIC TREATMENT OF PATIENTS SUFFERING FROM CORONARY INSUFFICIENCY -U-AUTHUR--PAKANSKAYA, ZH.A. CCUNTRY OF INFO--USSR SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 4, PP 109-112 DATE PUBLISHED-----70 SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES TOPIC TAGS-HEART DISEASE, CURONARY BLOOD CIRCULATION, HEPARIN, ANTICGAGULANT DRUG CENTROL MARKING--NO RESTRICTIONS DECUMENT CLASS-UNCLASSIFIED STEP NO--UR/0497/70/048/004/0109/0112 PROXY REEL/FRAME--3004/0745 CIRC ACCESSION NU--APC131340



1/2 025 UNCLASSIFIED PROCESSING DATE--300CT70
TITLE--ZINC BALANCE IN PATIENTS WITH ULCER DISEASE -U-

AUTHOR-PARASHCHAK, A.P.

CCUNTRY OF INFO-USSR

SGURCE-VRACHEBNOYE DELU, 1970, NR 4, PP 115-118

DATE PUBLISHED----70

SUBJECT AREAS-BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS-ZINC, FOOD ANALYSIS, URINE, DIGESTIVE SYSTEM DISEASE, SECRETION, GALLBLADDER, LIVER, POLAROGRAPHIC ANALYSIS

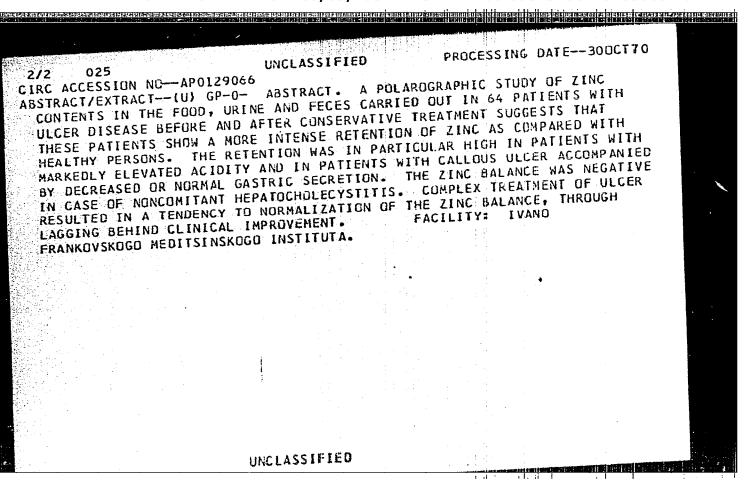
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DOCUMENT CLASS-UNCLASSIFIED PROXY REEL/FRAME-3002/1696

STEP NO--UR/0475/70/000/004/0115/0118

CIRC ACCESSION NO--APO129066

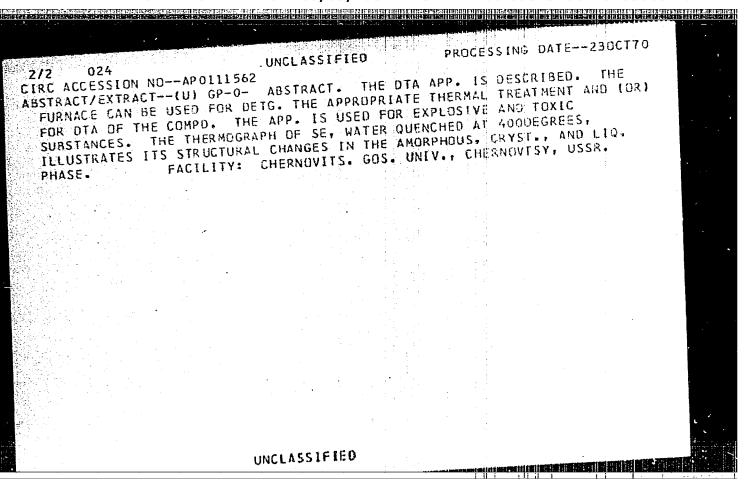
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UNCLASSI FIED TITLE--ALL PURPOSE APPARATUS FOR DIFFERENTIAL THERMAL ANALYSIS -U-1/2 024 AUTHOR-(03)-GALVIDIS, N.M., STRONGIN, B.G., PARASINCHUK, N.S. COUNTRY OF INFO--USSR SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 280-3 DATE PUBLISHED ---- 70 SUBJECT AREAS--PHYSICS TOPIC TAGS--THERMAL ANALYSIS, LABORATORY FURNACE, EXPLOSIVE, THERMOGRAM, SELENIUM, PHASE COMPOSITION, TOXICITY CONTROL MARKING--NO RESTRICTIONS STEP NO--UR/0076/70/644/001/0280/0283 DOCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1992/0369 CIRC ACCESSION NO--APOLI1562

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UDC 681.3.06.51

USSR

PARASOVA, N. A., BOZ, M. M. "Factographic Information Systems with Digital Computers. Analytic Review"

Faktograficheskiye Informatsionnyye Sistemy Na Etsvm. Analit. Obzor. [English Version Above], Moscow, 1970, 190 pages (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V646K).

Translation: A method is suggested for classification of various information systems. A number of concrete information systems are studied using computers included in the class of factorgraphic systems, i. e., containing completely formalized description of facts, data, etc. Both the general statements and regularities in the development of the structures of the systems, and the specifics of individual systems, related to specific areas of application, are studied. Systems with flexible structure, as well as systems for processing of commercial information are most fully studied.

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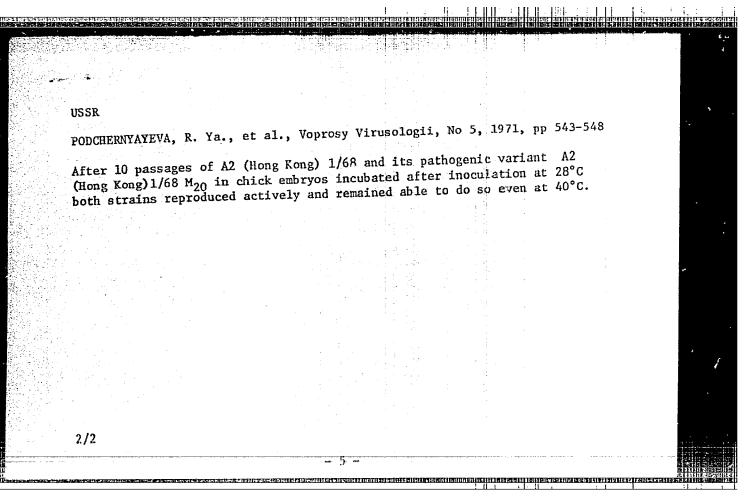
PODCHERNYAYEVA, R. Ya., SOKOLOV, M. I., PARASYUK, N. A., MYASNIKOVA, I. A., BASOVA, E. A., SOKOLOVA, N. N., and MOLIBOG, Ye. V., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR

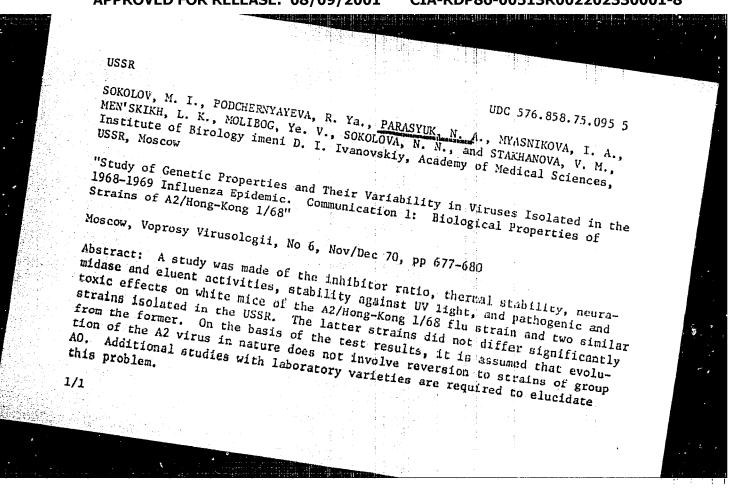
"Study of Genetic Markers and Their Variability in Influenza Virus Isolated the 1968-1969 Influenza Epidemic. II. Variability of Genetic Markers in Influenza Type A2 (Hongkong) Virus In Passages in Mice at Low Temperatures"

Moscow, Voprosy Virusologii, No 5, 1971, pp 543-548

Abstract: Ten passages of influenza type A2 (Hong Kong) virus in mice resulted in variants that produced lung changes typical of influenza in mice. After the 20th passage, the pathogenic variants exhibited increased reproductive activity at 36 and 40°C. All strains, except A2 (Hong Kong) 1/68 M20, resisted heating to 56°C. Like the original strains, they were completed adsorbed on chick erythrocytes but were more readily eluted from them. Neuraminidase activity was half that in the original strains. The pathological variants remained sensitive to normal animal serum inhibitors and did not agglutinate mouse erythrocytes. They resembled the original strains in resistance to trypsin, urea, and ultraviolet irradiation. 1/2

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UNCLASSIFIED PROCESSING DATE--020CT70
TITLE--HEATING OF CASTINGS IN A THERMAL FURNACE WITH A CAR TYPE BOTTOM -U-

AUTHOR-(05)-PARASYUK, P.F., SHERSTYUK, A.A., KORNIICHUK, A.I., TUNANSKIY,

B.F., BERKUN, M.N.

COUNTRY OF INFO--USSR

SOURCE-METALLOVED. TERM. OBRAB. METAL. 1970, (2), 49-50

DATE PUBLISHED----70

SUBJECT AREAS -- MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--METAL CASTING, METAL HEATING, HIGH MANGANESE STEEL, CAST STEEL, AUSTENITIC STEEL, METALLURGIC FURNACE/(U) LINGIBL HIGH MANGANESE STEEL

CONTROL MARKING--NO RESTRICTIONS

DUCUMENT CLASS--UNCLASSIFIED PROXY REEL/FRAME--1988/1288

STEP NU--UR/0129/70/000/002/0049/0050

CIRC ACCESSION NO--APO106069

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202330001-8"

PROCESSING DATE--020CT70 UNCLASSIFIED CIRC ACCESSION NO--APO105069 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR BETTER CONTROL OF HEATING IN A FURNACE WITH A CAR TYPE BOTTOM, THE THERMOCOUPLE SHOULD NOT BE PLACED IN THE ARCH OF THE FURNACE BECAUSE OF THE LARGE HEAT GRADIENT BETWEEN THE CASTING AND THE ARCH. IN THE STUDY OF HEATING A CASTING OF 110613L FOR 17 HR. BECAUSE OF THIS LARGE HEAT DIFFERENCE, THE CASTING HAS NOT HEATED TO THE NECESSARY TEMP. AS A RESULT, INSTEAD OF PURE AUSTENITE, UNDISSOLVED CARBIDES REMAINED IN THE CASTING. THE AMT. OF SCALE FORMED . ON 110G13L CASTINGS DEPENDS ON THEIR POSITION IN THE FURNACE; THE LESSER AMT. IN THE CENTER OF THE FURNACE. THE MOST AT THE END DWING TO LEAKS OF THE JOINT OF THE CAR TYPE BOTTOM AND THE LINING WALL. IN THE STUDY OF THE EFFECT OF COMPN. OF THE HEATING PRODUCTS FROM THE GAS ON SCALE FORMATION IN 110G13L DURING TEMPERING, ANAL. OF THE PRODUCTS SHOWED THAT WITH INCREASE IN EXCESS AIR, THE DEPTH OF THE SCALE AND DECARBURIZED LAYER ON THE SURFACE OF THE CASTINGS INCREASED. ARTHUR J. PEAT.

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USSR

PARATOV, G. M., LITKENS, Ye. M., and SHUL'GINA, G. S.

"Using the Electronic Computer to Model the Relation Between Qualitative Indices and Structural Parameters of a Transistor"

Kiev, Izvestiya VUZov SSSR--Radioelektronika, No. 6, 1970, pp 701-709

Abstract: This article considers the application of a mathematical model on an electronic computer for analyzing a planar diffusion transistor typically used as the active component in an integrated circuit. The computation of the qualitative indices of such a transistor as a function of its structural parameters, the impurity distribution in its structure, and the physical characteristics of the semiconductor, uses the description of the migration process and the recombination of carriers, as well as many other factors; consequently, a general algorithm for computing its static and dynamic qualitative indices is extremely difficult and must be worked out on an electronic computer. The model worked out by the author is given in the form of a block diagram. The mathematical model of the transistor contains the electrical qualitative indices of the device which are used as output parameters while the structural and physical indices of the integrated circuit are used as input parameters. The programs of the mathematical model were made up of the "Engineer" autocode input language, and the calculations were done on the Minsk-22 computer.

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PARAYEV. YU. I.,

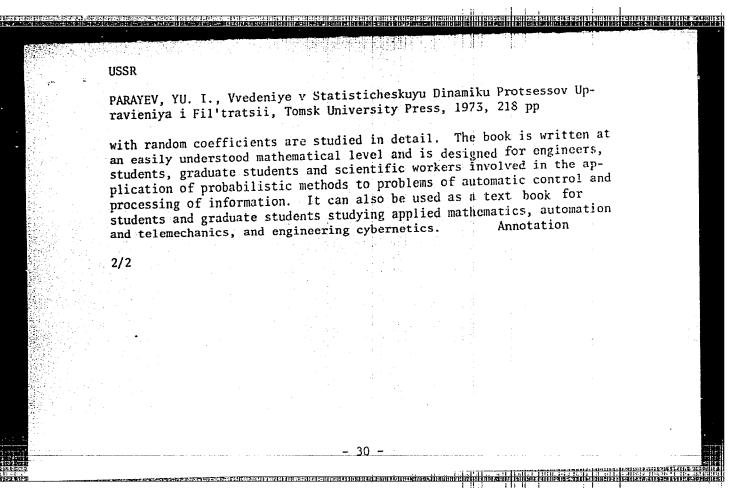
"Introduction to the Statistical Dynamics of Filtration and Control Processes"

Vvedeniye v Statisticheskuyu Dinamiku Protsessov Upravleniya i Fil'-tratsii [English version above], Tomsk University Press, 1973, 218 pp (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V223)

Translation: This book contains a systematic presentation of extensive material on the application of the theory of Markov processes and the theory of stochastic differential equations to problems of automatic control and processing of information. Primary attention is given to the following problems: investigation of the behavior of automatic systems described by ordinary differential equations, the right portions of which include random perturbations of Gaussian and Poisson types; calculation of optimal estimates of the instantaneous values of the coordinates of such systems on the basis of observations of a certain process statistically related to the output of the system; optimal control of such systems, including in the case when the output coordinates of the object are measured with random errors. Automatic systems described by linear stochastic differential equations and linear equations

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PARAYEV, Yu. I.

"Optimal Control with Inertial Stochastic Feedback"

Nelineyn. i Optimal'n. Sistemy [Nonlinear and Optimal Systems], Moscow, Nauka Press, 1971, pp 119-125, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 VII3 by R. Lintser).

Translation: The solution of the following problem of control with incomplete data is studied. Controlled process x(t) is the solution of the differential equation

$$\dot{x}_i = Ax_i + Bu_i.$$

where control $\mathbf{u}_{\mathbf{t}}$ is selected so as to minimize the functional

$$\frac{1}{2} \operatorname{M} \left[\int_{t_0}^{T} \left(x_t^* C x_t + u_t^* D u_t + 2 x_t^* F u_t dt \right) + x_T^* E x_T \right].$$

where the quadratic forms x*Cx + 2x* Fu and x*Ex are non-negatively defined, while u*Du is postively defined. It is assumed that the values of 1/2

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PARAYEV, Yu. I., Nelineyn. i Optimal'n. Sistemy, Moscow, Nauka Press, 1971, pp 119-125.

$$z(t) = \int_{t_0}^{T} S(t, \xi) x(\xi) d\xi + n(t),$$

can be observed, where $S(t,\,\xi)$ is a deterministic function, while n(t) is a Gaussian process with zero mathematical expectation and known correlation function. It is demonstrated that the optimal control is fixed by the formula $u(t)=G_T(t)\,\,\hat{x}_t$, where \hat{x}_t is an estimate of the maximum likelihood, for x_t , while $G_T(t)$ is a deterministic matrix. It is assumed here that where $n(t)\equiv 0$, the values of x_t can be restored without error and the maximum control for this case will be

$$u\left(t\right)=G_{T}\left(t\right)x_{t}.$$

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PARAYEV Yu I.

"Application of Theory of Conditional Markov Processes to Problems of Identification of Dynamic Objects"

Metody Upr. Bol'shimi Sistemami. T. 2 [Methods of Control of Large Systems, Vol. 2 -- Collection of Works], Irkutsk, 1970, pp 171-178 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V206 by Ye. Barzilovich).

Translation: A control object is studied, the status of which is described by a system of differential equations

$$\dot{x}_{l} = \sum_{k=1}^{m} I_{lk}(l, x, u) \, \sigma_{k} + g_{l}(l, x, u) + n_{l}, \ (l = 1, 2, ..., n),$$

where $x=\{x_1, x_2, \ldots, x_n\}$ is the vector of output phase coordinates of the object, $u=\{u_1, u_2, \ldots, u_q\}$ is the vector of input actions $a=\{a_1, a_2, \ldots, a_m\}$ is the vector of unknown parameters, $n=\{n_1, n_2, \ldots, n_n\}$ is white Gaussian noise with 0 mean and known spectral density matrix, $f_{ij}(t,x,u)$ and $g_i(t,x,u)$ are known functions.

The problem of determining unknown parameters a on the basis of observations of input u(t) and output x(t) of the object in sector $[t_0,t]$ is stated and solved.

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SOKOLOVA, N. V., and PARCHEVSKIY, V. P., Institute of Biology of the Southern Seas, Academy of Sciences Ukrainian SSR, and the Magadan Branch of TINRO [Pacific Ocean Scientific Research Institute of Fisherles and Oceanography]

"Lead-210 in Some Hydrobionts in the Sea of Okhotsk and the Bering Sea"

Sverdlovsk, Ekologiya, No 5, 1972, pp 30-36

Abstract: Investigations were conducted from 1966 to 1969 on the Po²¹⁰ content in the tissues of various fishes and mammals obtained from the Sea of Okhotsk and the Bering Sea. The mammals evaluated in the Bering Sea were Pusa hispida krascheninikovi, Eschrichtius gibbosus, and Histriophoca fasciata and are listed in sequence indicating increasing coefficient of Ph210 accumulation in bones (i.e., Pb210 in tissue/Pb210 in water). The fishes studied in the Sea of Okhotsk were Oncorhyncus keta, Eleginus gracilis Lepidopsetta sp., and Clupea harengus pallaci and the mammals that were investigated were Pusa hispida ochotensis and Phoca vitulina. The coefficient of accumulation of Pb210 in the tissues of manmals obtained from the two seas varied from 1000 to 2100, while for the fishes obtained from the Sea of Okhotsk it ranged from 110 to 220 for whole fishes, from 450 to 670 for bones, and from 580 to 800 for fins. Comparison was also made between the bone concentrations of Pb210 and 1/2

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SOKOLOVA, N. V. and PARCHEVSKIY, V. P., Ekologiya, No 5, 1972, pp 30-36

Sr⁹⁰ in the hair seal (Pusa hispida) found in the Sea of Okhotsk in 1969. The former element is a natural radionuclide and the latter is formed as a result of nuclear explosions; both enter the waters from the atmosphere. The coefficient of correlation was 0.94 for the ash content and 0.97 in terms of wet weight. Determinations of the equilibrium dose constants showed that the radionuclides of the Pb²¹⁰_Bi²¹⁰_Po²¹⁰ series are the major source of radiation in the case of marine organisms.

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PROKHOROV, V. Ya., SHILOV, V. M., AKATOV, A. K., and PARCHINSKAYA TO A LIBERT TO BE AND THE SHIP OF Epidemiology and Institute of Medical Biological Problems and Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"Activation of the Biological Properties of Staphylococci Isolated From Humans During a Prolonged Stay in a Hermetically Sealed Chamber"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971, pp 63-68

Abstract: Staphylococci were periodically isolated from three people confined to an airtight chamber for a year to study the biological properties of the microorganisms and determine whether the microbes could be exchanged between the subjects. Various strains of the same phage type (29/52) showed increased biological activity in the course of the year as manifested by a regular increase in the titers of alpha-toxin, appearance of fibrinolysin and beta-toxin not detected at the beginning of the experiment, and much greater virulence for mice. Before the experiment, Staphylococci of the phage type 29/52 were isolated from two of the subjects, but they were transmitted to the third subject at the beginning of the second month and 1/2

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